DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: STONE POND	Lake Area (ha):	10.44
Town: MARLOW	Maximum depth (m):	4.0
County: Cheshire	Mean depth (m):	1.2
River Basin: Connecticut	Volume (m^3) :	24500
Latitude: 43°09'30" N	Relative depth:	1.1
Longitude: 72°12'50" W	Shore configuration:	1.21
Elevation (ft): 1261	Areal water load (m/yr):	20.59
Shore length (m): 1400	Flushing rate (yr ⁻¹):	17.70
Watershed area (ha): 434.9	P retention coeff.:	0.47
<pre>% watershed ponded: 0.0</pre>	Lake type: natural	w/dam

BIOLOGICAL:	22 January 2003	11 July 2002
DOM. PHYTOPLANKTON (% TOTAL)	1 SPARSE - NO DOMINANT	CHRYSOSPHAERELLA 99%
	2	
	3	
PHYTOPLANKTON ABUNDANCE (units/ml)	
CHLOROPHYLL-A (µg/L)		11.88
DOM. ZOOPLANKTON (% TOTAL)	1 LRG CILIATE SPP. 61%	POLYARTHRA 40%
	2 KELLICOTTIA 13%	KERATELLA 33%
*	3 KERATELLA 9%	NAUPLIUS LARVA 8%
ROTIFERS/LITER	14	319
MICROCRUSTACEA/LITER	12	54
ZOOPLANKTON ABUNDANCE (#/L)	67	379
VASCULAR PLANT ABUNDANCE		Abundant
SECCHI DISK TRANSPARENCY (m)		1.2
BOTTOM DISSOLVED OXYGEN (mg/L)	3.2	0.6
BACTERIA (E. coli, #/100 ml)	1	4
	2	1
	3	

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None

Anoxic volume (m^3) : 1100

CHEMICAL:			STONE POI	ND		
	22 Janua	ary 2003	11 .	July 2002		
DEPTH (m)	1.0	2.0	1.0			3.0
pH (units)	5.6	5.6	6.5			6.1
A.N.C. (Alkalinity)	4.1	4.1	3.6			3.5
NITRATE NITROGEN	0.05	< 0.05	< 0.05		<	0.05
TOTAL KJELDAHL NITROGEN	0.30	0.50	0.30			0.40
TOTAL PHOSPHORUS	0.011	0.009	0.019			0.013
CONDUCTIVITY (µmhos/cm)	73.7	90.2	58.5		5	7.5
APPARENT COLOR (cpu)	38	40	68			70
MAGNESIUM			0.48			~
CALCIUM			2.3			
SODIUM			7.1			
POTASSIUM			0.45			-
CHLORIDE	12	17	11			10
SULFATE	7	7	4			4
TN : TP	32	56	16			31
CALCITE SATURATION INDEX			3.9			

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2002

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	5	2	11	Eutro.

COMMENTS:

- 1. Previously surveyed in 1979 where it was classified mesotrophic. The change in trophic class was partly due to increased chlorophyll and decreased water transparency, and partly due to a revised classification protocol between the two years. More frequently collected data is needed to determine if the change is part of a trend or normal year-to-year variation.
- 2. Good launch site with adequate parking.
- 3. Sparsely developed three houses along the shore.
- 4. This is a moderately acidic, tea-colored, eutrophic pond with abundant rooted plant growth.

FIELD DATA SHEET

LAKE: STONE POND

DATE: 07/11/2002

TOWN: MARLOW

WEATHER: Sunny & windy; 70° F.

weather: Sunny & windy; 70 F.				
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION	
0.1	21.9	7.7	88 %	
1.0	21.9	7.7	88 %	
2.0	21.9	7.5	86 %	
3.0	16.5	1.8	19 %	
3.5	15.0	0.6	6 %	
	 			

SECCHI DISK (m): 1.2 COMMENTS:

BOTTOM DEPTH (m): 4.0

TIME: 1126

*Dissolved oxygen values are in mg/L

AQUATIC PLANT SURVEY

e Eleocharis Spike rush Scat/Common N Nymphaea White water lily Common Y Nuphar Yellow water lily Scat/Common W Potamogeton Pondweed Scattered U Utricularia Bladderwort Common B Brasenia schreberi Water shield Scattered d Dulichium arundinaceum Three-way sedge Scattered G Gramineae Grass family Scat/Common	LAK	E: STONE POND	TOWN: MARLOW	DATE: 07/11/2002
GENERIC COMMON Pontederia cordata Pickerelweed Bur reed Common/Abu Eleocharis Nymphaea White water lily Common Yuphar Yellow water lily Scat/Commo Pondweed Scattered Utricularia Bladderwort Brasenia schreberi Water shield Common Water shield Scattered Dulichium arundinaceum Three-way sedge Gramineae Grass family Scat/Commo Myrica gale Sweet gale Scat/Commo St. John's-wort Sparse	Kav	PLANT	NAME	ABIINDANCE
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B Brasenia schreberi Water shield Scattered d Dulichium arundinaceum Three-way sedge Scattered G Gramineae Grass family Scat/Commo	W	Potamogeton	Pondweed	Scattered
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G Gramineae Grass family Scat/Common g Myrica gale Sweet gale Scat/Common h Hypericum St. John's-wort Sparse	В	Brasenia schreberi	Water shield	Scattered
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h Hypericum St. John's-wort Sparse	G	Gramineae	Grass family	Scat/Common
	g	Myrica gale	Sweet gale	Scat/Common
L Chamaedaphne calyculata Leatherleaf Sparse	h	Hypericum	St. John's-wort	Sparse
	L	Chamaedaphne calyculata	Leatherleaf	Sparse
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OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. Bladderwort may have been more abundant than indicated; the dark water and choppy surface made it difficult to see very far into the water.